

**MINIATURE FLUID DISPENSING END-EFFECTOR FOR GEOMETRICALLY
CONSTRAINED AREAS**

ABSTRACT OF THE DISCLOSURE

5 An end-effector precisely marks location lines (or dispense
fluids) on surfaces as part of an automated part marking system.
The automated part marking system that includes a multi-axis
gantry robot, a calibration stand, vision or location system(s),
and a series of fluid dispensing (inkjet) end-effectors to
accomplish the marking task. The end-effector use a pick shaped
10 stylus coupled to a fluid supply and metered by a high-speed
pulsed valve to precisely deliver fluids provides within
geometrically confined spaces.